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CLAIMS

1. A method for carrying out an authentication process for authenticating a subsequent transaction by any one of a plurality of users with data processing apparatus (10), including the step during the authentication process of operatively associating with the data processing apparatus (10) a selected one of a plurality of authentication storage means (12) respective to the users, each authentication storage means (12) storing predetermined authentication information and being registerable with a common telecommunications system (16) for which the users have respective telecommunications terminals, and the step of carrying out the authentication process via a communications link (19) with the common telecommunications system (16), the authentication process being carried out by authenticating means (18;102) incorporated in the telecommunications system (16) and involving the use of the predetermined authentication information stored by the selected one authentication storage means (12), the predetermined authentication information stored by each authentication storage means (12) corresponding to information which is used to authenticate that user's telecommunications terminal in relation to the telecommunications system (16) but the authentication process for authenticating the transaction by that user with the data processing apparatus (10) not requiring use of that user's telecommunications terminal nor requiring the telecommunications terminal to be actually authenticated by that information in relation to the telecommunications system (16).

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2. A method according to claim 1, in ¹⁵ which the authentication storage means (12) is associated with the data processing apparatus (10) by being associated with data or software for use by that data processing apparatus (10).
3. A method according to claim 2, in which the authentication storage means (12) is incorporated on a data carrier for the data or software.
4. A method according to claim 1, in which the authentication storage means (12) includes processing means.
5. A method according to claim 4, in which each user is authenticated in the telecommunications system (16) by means of the use of a smart card or subscriber identity module (e.g. SIM), and in which the authentication storage means (16) respective to that user corresponds to or simulates the smart card for that user.
6. A method according to any preceding claim, in which the authentication process involves the sending of a message and the generation of a response dependent on the message and the predetermined information.
7. A method according to any preceding claim, including the step of levying a charge for the transaction when authenticated.

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8. A method according to claim 7, in which the step of levying the charge is carried out by the said system (16)

9. A method according to any preceding claim, in which the data processing apparatus (10) is a personal computer.

10. A method according to any one of claims 1 to 9, wherein the authentication storage means (12) communicates wirelessly to authenticate the transaction.

11. A method according to claim 5, wherein the authentication storage means (12) is smart card or SIM that is operable to authenticate the user's telecommunications terminal for use in the system (16).

12. A method according to any one of claims 1 to 11, wherein the authentication storage means (12) is provided with a carrier (32) coupleable to the data processing apparatus (10).

13. Data processing apparatus (10) in combination with a selected one of a plurality of authentication storage means (12) which are respective to users and are each for storing predetermined authentication information relating to the carrying out of an authentication process for authenticating a subsequent transaction by the users with the data processing apparatus (10), the authentication storage means (12) all being registrable with a common telecommunications system (16) for which the users have respective telecommunications terminals, the authentication storage means (12) when operatively associated with the data

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processing apparatus (10) being operative to carry out the authentication process via a communications link (19) with that system, the authentication process being carried out by authenticating means (18;102) incorporated in the system (10) and involving the use of the predetermined information stored by the selected one authentication storage means (12), the predetermined authentication information stored by each authentication storage means (12) corresponding to information which is used to authenticate that user's telecommunications terminal in relation to the telecommunications system (16) but the authentication process for authenticating the transaction by that user with the data processing apparatus (10) not requiring that use of user's telecommunications terminal nor requiring the telecommunications terminal to be actually authenticated by that information in relation to the telecommunications system (16).

14. Apparatus according to claim 13, in which the authentication storage means (12) includes processing means.

15. Apparatus according to claim 13 or 14, in which each user is authenticated in the telecommunications system (16) by means of the use of a smart card or subscriber identity module (e.g. SIM), and in which the authentication storage means (16) respective to that user corresponds to or simulates the smart card for that user.

16. Apparatus according to claim 13,14 or 15, in which the authentication process involves the sending of a message and the generation of a response dependent on the message and the predetermined information.

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17. Apparatus according to any one of claims 13 to 16, including means for levying a charge for the transaction when authorised.

18. Apparatus according to claim 17, in which the means for levying the charge is part of the common system (16).

19. Apparatus according to any one of claims 13 to 18, wherein the authenticate storage means (12) communicates wirelessly to authenticate the transaction.

20. Apparatus according to claim 15, wherein the authentication storage means (12) is the smart card or SIM that is further operable to authenticate the user's telecommunications terminal for use in the system.

21. Apparatus according to any one of claims 13 to 20, wherein the authentication storage means (12) is provided with a carrier (32) coupleable to the data processing apparatus (10).

22. A data carrier carrying data for use in and by data processing apparatus (10) after an authentication process involving the use of the data processing apparatus (10) and separate authenticating means (18;102), the data carrier also incorporating authentication storage means (12) storing predetermined authentication information respective to a user,

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the authentication storage means (12) being registered with a telecommunications system (16) which includes the authenticating means (18;102) and for which the user has a telecommunications terminal, the authentication storage means (12) being responsive to an input message for deriving a response dependent on the input message and on the authentication information for enabling the authenticating means (18;102) to carry out the authentication process via a communication link (19) with the authenticating means (18;102) in the said system (16) whereby to authenticate a subsequent transaction by the user with the data processing apparatus and which involves use of the data carried by the data carrier, the predetermined authentication information stored by the authentication storage means (12) corresponding to information which is used to authenticate the user registered with the telecommunications system (16) in relation to use of that user's telecommunications terminal in the telecommunications system (16), but the authentication process for authenticating the transaction by that user with the data processing apparatus (10) not requiring use of the user's telecommunications terminal nor requiring the telecommunications terminal to be actually authenticated by that information in relation to the telecommunications system (16).

23. A data carrier according to claim 22, in which the authentication storage means corresponds to or simulates respective subscriber identity modules (SIMs) in the form of smart cards.

24. A data carrier according to claim 22 or 23, in which the data carried by the data

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carrier includes software.

25. A data carrier according to any one of claims 22 to 24, wherein the authentication storage means (12) communicates wirelessly to authenticate the transaction.

26. A data carrier according to claim 23, wherein the authentication storage means (12) is the smart card or SIM that is further operable to authenticate the user's telecommunications terminal for use in the system.

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